

291 Word #1

Key

1. x $2x+2=128$
 $x+1$ $2x=126$
 $x+2$ $x=63$
 $63, 64, 65$

2. x $4x+12=152$
 $x+2$ $4x=140$
 $x+4$ $x=35$
 $x+6$
 $35, 37, 39, 41$

3. x $x+x+4 = x+2+4$
 $x+2$ $2x+4 = x+6$
 $x+4$ $x=2$
 $x+6$
 $2, 4, 6, 8$

4. x $x+x+4 = 3(x+2-14)$
 $x+2$ $2x+4 = 3(x-12)$
 $x+4$ $2x+4 = 3x-36$
 $40 = x$
 $40, 42, 44$

Alternate answer 12, 14, 16
we can discuss

$$5. \quad x = 90 - x + 12$$

$$2x = 102$$

$$x = 51$$

$$90 - 51 = 39$$

39 is the complement

$$6. \quad x = 2(90 - x) - 15$$

$$x = 180 - 2x - 15$$

$$3x = 165$$

$$x = 55$$

$$55^\circ + 35^\circ$$

$$7. \quad 4x = 180 - x$$

$$5x = 180$$

$$x = 36^\circ$$

$$144^\circ$$

$$8. \quad x$$

$$180 - x$$

$$90 - x$$

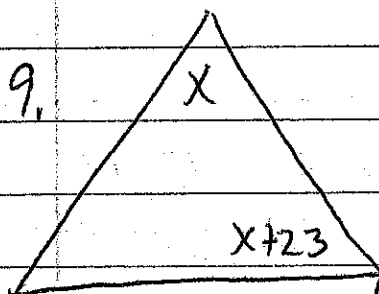
$$180 - x = 4(90 - x) - 21$$

$$180 - x = 360 - 4x - 21$$

$$3x = 159$$

$$x = 53$$

9.



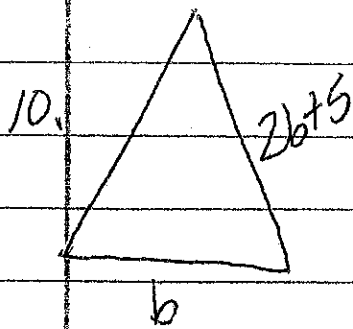
$$x + x + 23 + (2x + 23 - 6) = 180$$

$$4x + 46 - 6 = 180$$

$$4x = 140$$

$$x = 35$$

$$35^\circ, 58^\circ, 87^\circ$$



$$10'' + 25''$$

$$2(2b+5) + b = 60$$

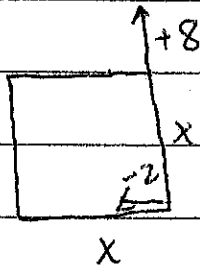
$$4b + 10 + b$$

$$5b = 50$$

$$b = 10 \text{ inches}$$

5 feet*

11.



$$2(x+8) + 2(x-2) = 40$$

$$x+8 + x-2 = 20$$

$$2x + 6 = 20$$

$$2x = 14$$

$$x = 7$$

$$7 \text{ ft}$$

12. $l = 2w$

Original

$$A = 2w \cdot w$$

New Area
 $(2w-3)w = A$

$$2w^2 = (2w-3)w + 12$$

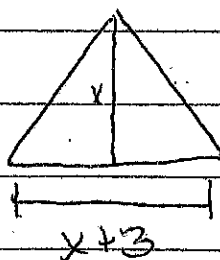
$$2w^2 = 2w^2 - 3w + 12$$

$$3w = 12$$

$$w = 4$$

$$4 \text{ cm} \times 8 \text{ cm}$$

13.



$$A_{sq} = 2A_{tr} - 18$$

$$x^2 = 2\left(\frac{1}{2}x(x+3)\right) - 18$$

$$x^2 = x^2 + 3x - 18$$

$$18 = 3x$$

$$6 = x$$

$$6 \text{ in}$$